

Work Order ID 61039

August 4, 2010 1:38:22 PM



Page 1

Item ID: D206-642-441

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 8/04/10 Start Qty: 1.00



Cust Item ID:

Required Date: 8/16/10 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: 14 Date: 10-8-09 Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D2650	Rev F

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile and create labels per PPP D206-642-441 CHG002

N/A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110		0.00							
	Skidtubes								
Skidtubes	Memo	0.00							
	1-Deburr Fwd edge of tube								
	2-Remove ridge on inside of Fwd edge of tube as per Dwg D2650								
	3-Weld Fwd Cap as per Dwg D2650. Use aluminum rod. Grind D2647 to fit as required.								
	A/R <input type="checkbox"/> Aluminum Rod <input type="checkbox"/> <u>M14x42/M12507</u>								
	4-Grind weld flush to cap on top surface only.								
	5-Cut aft end 138.60" from front of tube								
	6-Drill pilot holes using drill jig DT8025 & DT8169 (A,B,C,D). Open to Ø0.312".								
	7-Drill holes for wearplates using DT 8028-7. Open to Ø 0.297".								
	8-Open using #6 Drill Bit								
	9-Open holes for Tow Ring to Ø0.625" as per Dwg D2650, D2650-7 Drilling Detail								
	10-Remove inner indexing ridge on aft end of skidtube as per Dwg D2650								
	11-Deburr and Blow out all chips from inside the tube								

> DP 10-8-10

BE 10/08/10

BE 10/08/10

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

115

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

8/04/11

116

QC10- Inspect visual per QSI004- ground welds

0.00



QC

Memo

0.00

Quality Control

8/04/11

②

120

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

DP

10-8-11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

(IX) 2 MS 10-08-12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Start Date: 8/04/10 Start Qty: 1.00



Cust Item ID:

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

140

0.00



Skidtubes

Skidtubes

0.00

Memo1-Open holes to finished size as per Dwg D2650, D2650-7 Drilling Detail
(without cutting fluid)


2-Countersink crossbolt spacer holes as per Dwg D2650(without cutting fluid)

3-Deburr. Blow out chips. Grind alodine off around crossbolt spacer.

4-Bond D2654-7 web in place as per QSI 015Ensure holes line upAllow 12 Hrs.
cure time before cutting☐

Start Date: 10-8-12

Time: ☐ 10:15AM☐Finish Date: 10/8/16 ☐Time: ☐ 7:50AMA/R ☐ Sikaflex-291 ☐ M115114 ☐Sikaflex expiry date: ☐ 11-1-30


10-8-12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

150



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

0.00

Memo

8/10/08/16

QC

160



Skidtubes

Skidtubes

Skidtubes

0.00

0.00

Memo

1-Prep per QSI 005 and Insert cross bolt spacers D2649. Weld as per QSI 004 and Dwg D2650. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.

A/R Aluminum Rod M112507

2-Grind welds flush as per Dwg D2650.

3-Counterbore 5/16" x 0.750" deep as per Dwg D2650 Deburr

BE 10/28/18
DP 10-8-19

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

200

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

Brush alodine tube on crossbolt spacer area, do not acid etch, do not dip tube in tank.

205

0.00



SprayPaint

Memo

0.00

Spray Painting

Spray paint Delfleet Blue
Primer B 114424
Delfleet Blue B 113171
Clear delfleet B 115506

206

QC14- Inspect Spray Paint

0.00



QC

Memo

0.00

Quality Control

10/08/2010

10/08/2010

10/09/2010

10/09/2010

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

230

0.00



HandFinish

HandFinishing

0.00

Memo

1-Install inserts & wearpads as per dwg D2922. Use a drop of Sikaflex inside insert holes before installing wearpad/wearplate.

A/R ☐ Sikaflex-291 ☐ 114093 ☐

Sikaflex expiry date: ☐ 10/2010

2-Install O-Rings D2651-3 on plugs D2651-1 with Petroleum Jelly and install plugs as per Dwg D2650. Clean excess adhesive

3-Install MS27039-4-06 Screw as per DEO 9153

4-Inspect for foreign object per QSI 024

5-Install D2646 Aft Cap and seal with SikaflexClean excess adhesive

A/R ☐ Sikaflex-291 ☐ 114093 ☐

Sikaflex expiry date: ☐ 10/2010

6-Wing Walk as per Dwg D2650-7 and QSI 005 4.4

Batch: 115028

MA 10 09 03 (1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Work Order ID 61039

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Start Date: 8/04/10 Start Qty: 1.00



Cust Item ID:

Required Date: 8/16/10 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

240



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

S 10/09/09

0.00

Memo

40

250



Packaging

Packaging

Packaging

0.00

Memo

Identify and pack for shipping as per PPP D206-642-441

Location: _____

PPP Rev: _____ PPP61053

0.00

10/09/09

260



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

0.00

Memo

10/09/0910/09/09

W/O:		WORK ORDER CHANGES					
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Picklist Print

August 4, 2010 1:38:26 PM

Page 1

Work Order ID: 61039

Parent Item: D206-642-441

Parent Item Name: Replacement Skidtube





Start Date: 8/04/10

Required Date: 8/16/10

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:H 05.10.11 Added D3429-1 per CHG002 KJ/CP/JLM
IPP Rev:I 08-05-01 add QC3 DD verified by:EC
IPP Rev:J 08-09-29 revF as per dwg DD verified by:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2620  Skidtube, 206 Skidtube		Manufactured	No			110	Each	8.0000	1	1			
<div> <div>Location</div> <div>Loc Qty</div> <div>Loc Code</div> </div> <div> <div>LG</div> <div>8</div> <div></div> </div> <div> <div>57542</div> <div>8</div> <div></div> </div> <div> <div>110</div> <div>Each</div> <div>79.0000</div> </div> <div> <div>1</div> <div>1</div> <div></div> </div> <div> <div>DD</div> <div>10-8-10</div> </div>													
D2646  Aft Cap		Manufactured	No			110	Each	79.0000	1	1			
<div> <div>Location</div> <div>Loc Qty</div> <div>Loc Code</div> </div> <div> <div>FP-4</div> <div>70</div> <div></div> </div> <div> <div>57332</div> <div>70</div> <div></div> </div> <div> <div>FP6</div> <div>9</div> <div></div> </div> <div> <div>52663</div> <div>9</div> <div></div> </div> <div> <div>110</div> <div>Each</div> <div>76.0000</div> </div> <div> <div>1</div> <div>1</div> <div></div> </div> <div> <div>MA</div> <div>10-05-03</div> </div>													
D2647  Cap		Manufactured	No			140	Each	76.0000	1	1			
<div> <div>Location</div> <div>Loc Qty</div> <div>Loc Code</div> </div> <div> <div>FP</div> <div>76</div> <div></div> </div> <div> <div>55352</div> <div>76</div> <div></div> </div> <div> <div>140</div> <div>Each</div> <div>0.0000</div> </div> <div> <div>1</div> <div>1</div> <div></div> </div> <div> <div>MA</div> <div>10-09-03</div> </div>													
D2654-7  Web		Manufactured	No			160	Each	0.0000	1	1			
<div> <div>Location</div> <div>Loc Qty</div> <div>Loc Code</div> </div> <div> <div>FP</div> <div>76</div> <div></div> </div> <div> <div>55352</div> <div>76</div> <div></div> </div> <div> <div>160</div> <div>Each</div> <div>0.0000</div> </div> <div> <div>1</div> <div>1</div> <div></div> </div> <div> <div>BB</div> <div>10/08/10</div> </div>													

B61264 ①

DP 10-8-12

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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Work Order ID: 61039



Parent Item: D206-642-441



Parent Item Name: Replacement Skidtube

Start Date: 8/04/10

Required Date: 8/16/10

Start Qty: 1.00

Required Qty: 1.00

CCR264SS3-3

Purchased

No

170

Each

532.0000

2

2



Cherry Rivet

Location

Loc Qty

Loc Code

ST311

532

112314

4

113539

60

113973

468

170

Each

140.0000

23

23

D2649

Manufactured

No



Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG

140

58545

12

60652

128

170

Each

39.0000

1

1

D2680-041

Manufactured

No



Nut Plate

Location

Loc Qty

Loc Code

ST021

39

55366

39

DP 10-8-19

23 BE 10/8/10

DP 10-8-19

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Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
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Work Order ID: 61039

Parent Item: D206-642-441

Parent Item Name: Replacement Skidtube

Start Date: 8/04/10

Required Date: 8/16/10

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-130 Purchased

No

230

Each

3,842.000

60

60



Insert

Location

Loc Qty

Loc Code

PKG11

3602

114723

3602

ST282

201

110511

38

114407

163

ST381

39

114654

39

AN960JD10L NAS1149D0332J Purchased

No

230

Each

2,635.000

62

62



Washer

Location

Loc Qty

Loc Code

ST348

2635

110985

2635

AN960JD416 NAS1149D0463J Purchased

No

230

Each

0.0000

1

1



Washer

B*110153

CR3212-4-03 Purchased

No

230

Each

1,926.000

2

2



Cherry Rivet

Location

Loc Qty

Loc Code

ST311

1926

111359

5

112314

2

114436

448

114450

89

114859

1382

August 4, 2010 1:38:27 PM

Shop Packet Print

② DP 10-8-19

W/O:		WORK ORDER CHANGES					
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Parent Item: D206-642-441

Parent Item Name: Replacement Skidtube

Start Date: 8/04/10

Required Date: 8/16/10

Start Qty: 1.00

Required Qty: 1.00

D2651-1 Manufactured No 230 Each 748.0000 22 22



Plug



ml 10.09.03

Location Loc Qty Loc Code

FP 152
51530 152
fpa 596
53349 411
57869 185

D2651-3 Manufactured No 230 Each 356.0000 22 22



O-Ring



ml 10.09.03

Location Loc Qty Loc Code

FP 356
46114 356

D3535-15 Manufactured No 230 Each 10.0000 1 1



Wearshoe



ml 10.09.03

Location Loc Qty Loc Code

FP18 10
59236 10

D3535-23 Manufactured No 230 Each 1.0000 1 1



Wearshoe



ml 10.09.03

Location Loc Qty Loc Code

FP21 1
57730 1

B# 60231

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 5

August 4, 2010 1:38:27 PM

Work Order ID: 61039

Parent Item: D206-642-441

Parent Item Name: Replacement Skidtube

Start Date: 8/04/10

Required Date: 8/16/10

Start Qty: 1.00

Required Qty: 1.00

D3535-37 Manufactured No

230 Each

17.0000

1

1



Wearshoe



mm 10.09.03

Location

Loc Qty

Loc Code

FP

17

51654

4

56101

13

D3536-15 Manufactured No

230 Each

25.0000

1

1



Gasket



mm 10.09.03

Location

Loc Qty

Loc Code

FP

18

56055

6

60875

12

FP11

7

59238

7

D3536-23 Manufactured No

230 Each

14.0000

1

1



Gasket



mm 10.09.03

B# 61237

Location

Loc Qty

Loc Code

FP011

14

58819

2

60234

12

D3536-37 Manufactured No

230 Each

15.0000

1

1



Gasket



mm 10.09.03

B# 51641

Location

Loc Qty

Loc Code

FP

15

56102

15

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Shop Packet Print

Page 5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

August 4, 2010 1:38:27 PM

Work Order ID: 61039



Parent Item: D206-642-441



Parent Item Name: Replacement Skidtube

Start Date: 8/04/10

Required Date: 8/16/10

Start Qty: 1.00

Required Qty: 1.00

D3537-1 Manufactured No

230 Each 7.0000 6 6



ml 10.09.03

Wearpad

Location Loc Qty Loc Code

FP	1	
55465	1	
FP17	6	
57713	3	
59593	3	

B# 61201

D3537-3 Manufactured No

230 Each 16.0000 1 1



ml 10.09.03

Wearpad

Location Loc Qty Loc Code

FP19	16	
59711	16	

MS27039-1-08 Purchased No

230 Each 1,763.000 2 2



ml 10.09.03

Screw

Location Loc Qty Loc Code

ST291	1763	
110835	563	
114718	200	
115108	1000	

MS27039-4-06 Purchased No

230 Each 25.0000 1 1



ml 10.08.03

Screw

Location Loc Qty Loc Code

ST292	25	
109061	25	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

Picklist Print

Page 7

August 4, 2010 1:38:27 PM

Work Order ID: 61039



Parent Item: D206-642-441



Parent Item Name: Replacement Skidtube

Start Date: 8/04/10

Required Date: 8/16/10

Start Qty: 1.00

Required Qty: 1.00

MS27039C1-08

Purchased

No

230

Each

1,058.000

60

60



MM 10.09.03

SCREW

Location

Loc Qty

Loc Code

FP

1000

115336

1000

ST293

58

19185

58

August 4, 2010 1:38:27 PM

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Page 7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

QTY -1	QTY -3	QTY -5	QTY -7	PART NUMBER	DESCRIPTION
X				D2650-1	SKIDTUBE ASSEMBLY
	X			D2650-3	SKIDTUBE ASSEMBLY
		X		D2650-5	SKIDTUBE ASSEMBLY
			X	D2650-7	SKIDTUBE ASSEMBLY
1	1	1	1	D2600-1-160	EXTRUSION
1				D2654-1	WEB
	1			D2654-3	WEB
		1		D2654-5	WEB
			1	D2654-7	WEB
1	1	1	1	D2646	AFT CAP
1	1	1	1	D2647	CAP
17	18	19	23	D2649	CROSS BOLT SPACER
16	18	14	22	D2651-1	PLUG
16	18	14	22	D2651-3	O-RING
1	1	1	1	D2680-041	NUT PLATE
2	2			D3286-1	DOUBLER
2	2			D3286-3	STUD
42	44	54	60	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, ALS7-1032-130)
2	2	2	2	AN960JD10L	WASHER
2	2	2	2	CCR264SS3-3	RIVET
2	2	2	2	CR3212-4-03	RIVET
2	2	2	2	MS27039-1-08	SCREW
1	1	1	1	MS27039-4-06	SCREW
1	1	1	1	AN960JD416	WASHER
52	52			CR3212-4-04	RIVET

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 41039
B8108-04

RELEASED
08-07-23/17

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
-BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: N/A
- 8) WELD PER DART QSI 004
- 9) DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 10) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- 11) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)
- 12) DRILL Ø0.297 FOR ALS7-1032-130 INSERTS USING TEMPLATE DT8056-1 ON -1 TUBE, DT8056-3 ON -3 TUBE, DT8056-5 ON -5 TUBE, AND DT8056-7 ON -7 TUBE. INSTALL INSERTS AFTER FINISH.
- 13) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

F	DRAWING UPDATED TO CURRENT STANDARDS. SHT 6 ADDED. ALL SECTION AND DETAIL VIEWS TRANSFERRED TO SHT 6. SHT 1 IN PL PART D2649 QTY UPDATED. SHT 6 SECT C-C GRIND INSTRUCTIONS DELETED FROM NOTE 7 (SEE NCR 239).	AJS	08.08.08
E	REMOVE CBORE, CHG DRILL, ADD CHAMFER	CP	06.03.30
D	REDRAW; INCCRP. DE09136/9153/9163 MOD GROUND HANDLING ON D2650-1/-3	CP	04.05.17
C	CHANGE HOLE PATTERN AND FRONT END	DS	97.10.29
B	AS MANUFACTURED CHANGES	DS	97.06.26
A	NEW ISSUE	DS	97.03.25
REV.	DESCRIPTION	BY	DATE
DESIGN	DS	DART AEROSPACE USA, INC PORT HADLOCK, WA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2650	SHEET 1 OF 6
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DE APPR.		206/407 SKIDTUBE ASSEMBLIES	NTS
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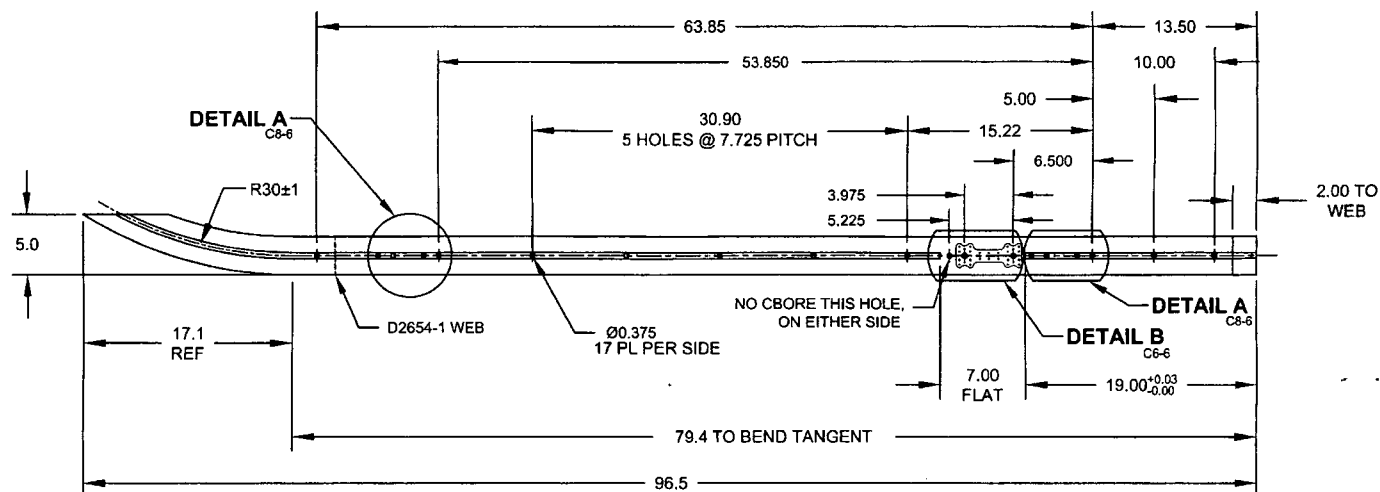
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

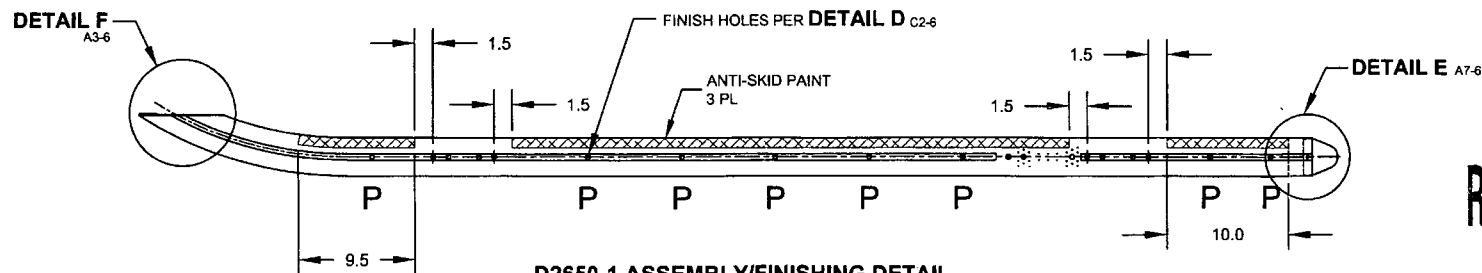
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D2650-1 BENDING/DRILLING DETAIL



D2650-1 ASSEMBLY/FINISHING DETAIL

wlb 61039

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68-09-22-111

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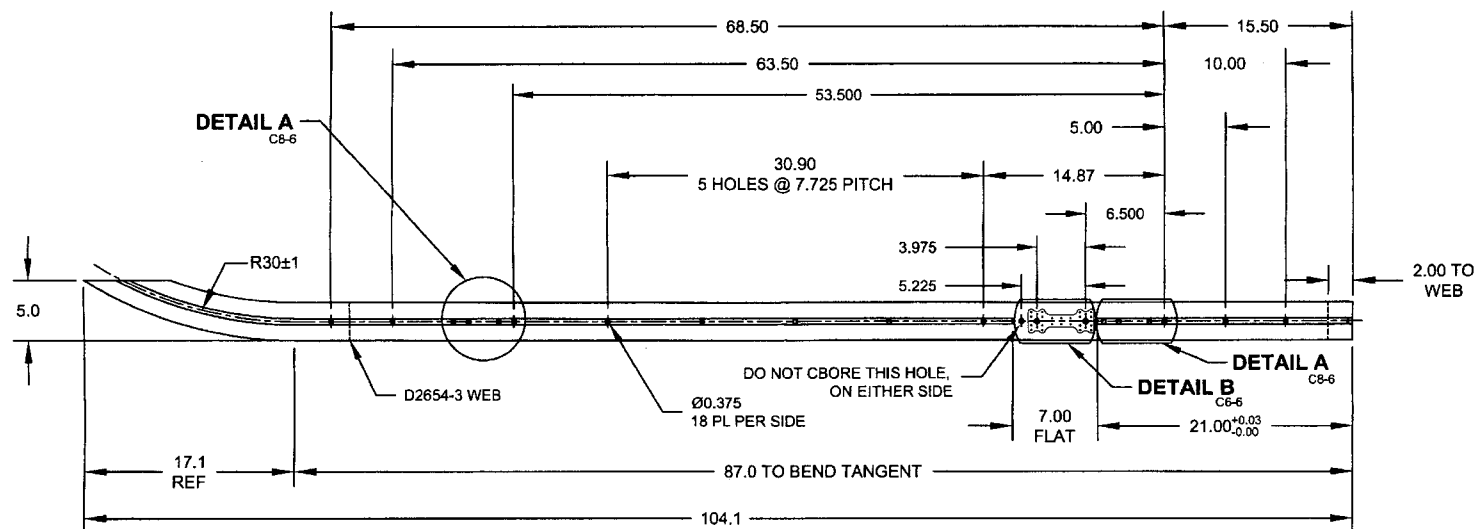
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

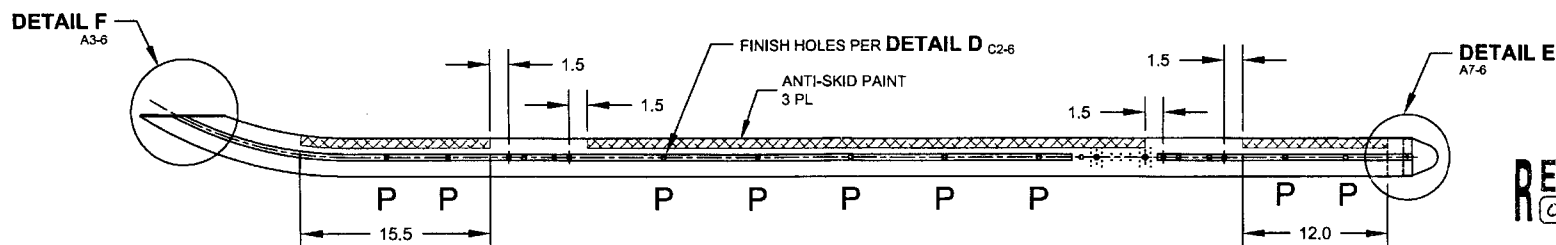
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D2650-3 BENDING/DRILLING DETAIL



D2650-3 ASSEMBLY/FINISHING DETAIL

wlb 61039

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08 07 22 118

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MFG. APPR.		D2650	SHEET 3 OF 6
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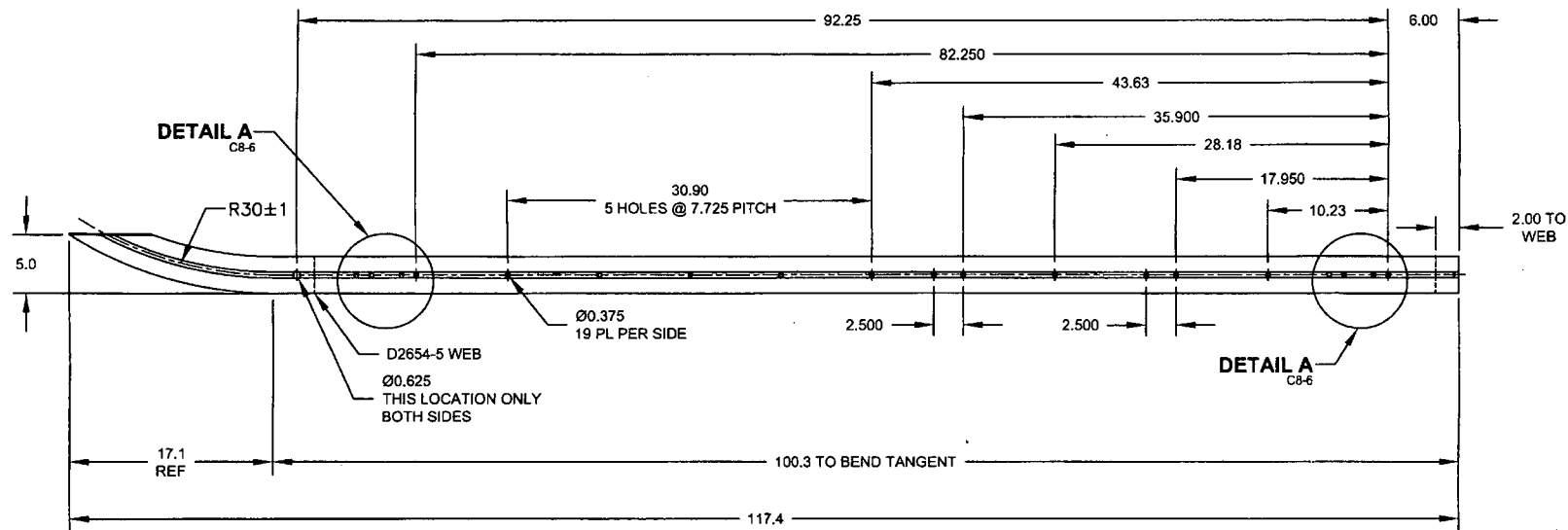
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

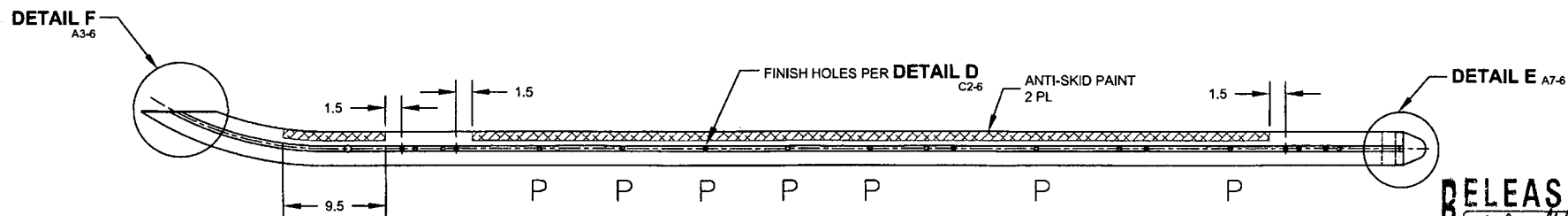
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D2650-5 BENDING/DRILLING DETAIL



D2650-5 ASSEMBLY/FINISHING DETAIL

DESIGN	DS	DART AEROSPACE USA, INC	
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CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2650	SHEET 4 OF 6
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08-09-22/11P

wl060391

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

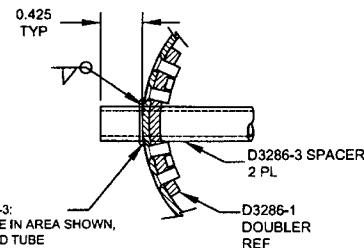
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

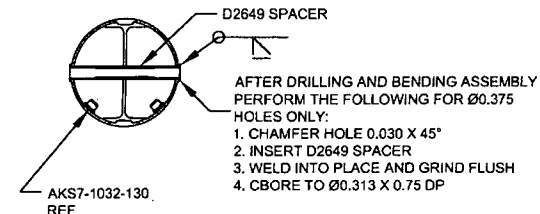
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

SECTION C-C C7-6 SCALE NONE



- TO INSTALL D3286-1/3:
1. GRIND OFF FLANGE IN AREA SHOWN, FLUSH WITH ROUND TUBE
 2. LOCATE & DRILL D3286-1 DOUBLER USING DT3286-1T1
 3. ENLARGE HOLES IN D3286-1 TO Ø0.500
 4. ENLARGE HOLES IN TUBE TO Ø0.625 AND CHAMFER HOLE 0.030x45°
 5. RIVET D3286-1 TO TUBE
 6. INSERT D3286-3 SPACER
 7. WELD IN PLACE.



DETAIL D

FOR Ø0.375 HOLES ONLY
SCALE 3X

B4-2
B4-3
B4-4
B4-5

- AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR Ø0.375 HOLES ONLY:
1. CHAMFER HOLE 0.030 X 45°
 2. INSERT D2649 SPACER
 3. WELD INTO PLACE AND GRIND FLUSH
 4. CBORE TO Ø0.313 X 0.75 DP

DETAIL F NOTES:

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D2647 (TRIM AS NECESSARY)
4. WELD D2647 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D2680-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D2680-041 PRIOR TO FINISH

RELEASED
08-09-2018

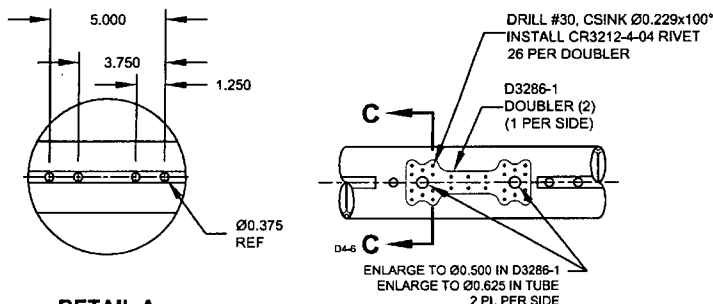
DETAIL F

SCALE NONE

DESIGN	DS	DART AEROSPACE USA, INC	
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MFG. APPR.		D2650	SHEET 6 OF 6
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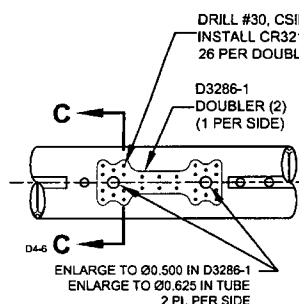
DETAIL A

SCALE 2X
C2-2
D7-2
C2-3
D7-3
C2-4
D7-4
C2-5
D6-5



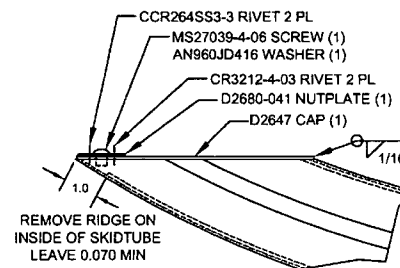
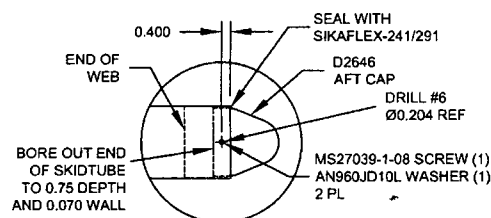
DETAIL B

SCALE 2X
C3-2
C3-3



DETAIL E

SCALE 2X
B2-2
B2-3
B1-4
B1-5



W/O:		WORK ORDER CHANGES					
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 237

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Berclay Elliott
Job number: 61039
Part number: D206-412-441
Description: 206 skid tube
Welding Process: Tig[☒] Mig[]
Base material: Aluminium
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier Del Del Date of Test Coupon 10.08.19
Welder Berclay Elliott Date of Test Coupon 10.08.19

The above named individual is qualified in accordance with AWS D17.1.2001 to weld